PRIMELAB 1.0
MULTITEST

PHOTOMETER

INNOVATION

Accurate and reliable water testing

1 JENCOLOR Sensor - ALL Parameters

(visible wavelength range)

Fast Bluetooth PC-Connection

Powerful Software

by

Pool-i.d.®

Water-i.d.®

Made in Germany

Sensor/Optics by

JENCOLOR

PrimeLab 1.0

MULTITEST

The PrimeLab Desktop-Assistant. A powerful tool!

PrimeLab.exe

Photometer meets Future

Photometers for electronic and highly accurate determination of water values are standard equipment in every laboratory.

Similarly, mobile phones are standard equipment in our daily lives, and yet over the past few decades they have continuously adapted to technical progress.

Do you still make calls today with a mobile phone of past generations from 10 or 20 years ago or do you prefer the benefits of smartphones with fast Bluetooth connection, synchronisation with your PC software, apps and many other technical advantages?

How about your photometer ...?

has it kept pace with technological progress, or do you still transmit your data via a serial port, an IR interface or even not at all!?

Is your data analysis restricted to predefined, parameters?

Did you have a choice of which parameters you want to measure?

Is the performance of your photometer limited to a few or even only one wavelength?

Time for a change!

Introducing the next generation of photometers!

Data connection via Bluetooth within seconds, similar to your smartphone in your car.

A sensor by JENCOLOR with unprecedented accuracy, able to measure all parameters where colour development is visible to the human eye after adding a reagent (visible wavelength).

Software that will offer you not only user-based management of your measurement sources (e.g. pools) and related measurement data but also offer advice on adjusting the water values back to ranges defined by you.

Software allowing you to easily upload additional parameters on your Photometer.

A device that auto-calibrates itself within milliseconds at the push of a button without having to return it to the manufacturer!

...

Sensor/Optics by

JENCOLOR

Sensor/Optics by

JENCOLOR

The JENCOLOR
Multiple-Color-Sensor
(scale ~ 1:20)

The Sensor

1 Light-Source
1 Sensor
ALL Parameters

Sometimes little miracles happen when two completely different industries happen to meet and previously unforeseen synergies arise.

This is happened when we started the development of the "PrimeLab" in late 2010 with our development partner.

JENCOLOR

JENCOLOR is the brand of a subsidiary of a globally renowned optics and sensor manufacturer, with its headquarters in Jena in Thuringia, Germany.
The "JENCOLOR Multiple Color" sensors are currently used in medical equipment, pre-press and even in passenger aeroplanes for LED light control in the cabin.

Technology / Colour

The Human Eye sees colour when light falls on to the subject and light waves return to the human eye.
Depending on the shape of this wave – this is called "wavelength" – we see different colours, such as red, green, etc.
The wavelengths visible to the human eye range from 380 to 780 nm.
All colours recognizable by the eye are in this range (see graph).

The difference

When a coloured reagent is added to a water sample using a conventional photometer, light is passed through the sample, with an LED at a specific wavelength, to a sensor placed on the other side of the sample which detects how much light has passed through the water sample (transmission).
From this single value on one wavelength then the water value, such as "pH 7.25", is determined, using a table previously defined in the unit.
Currently measurement of a comprehensive range of parameters on one device has required either installation of several light sources and sensors (set to specific wavelengths) or use of colour interference filters, to generate different wavelengths. Only one specific wavelength is measured using this technique only allowing limited parameters.

The JENCOLOR MultiColor sensor has the required filters already installed on the sensor itself, and measures across several channels. This enables the PrimeLab to measure all parameters that, after addition of a reagent, show a visible colour – with unprecedented precision, because the measurement is performed not "around" but precisely at the wavelength range of the sample measuring the colour in seven different scales simultaneously.

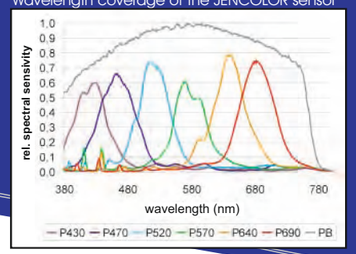
Tests have shown that the JENCOLOR sensor, once calibrated, achieves 98 % of the accuracy of a spectrometer! And all this with only 1 light source and only 1 sensor!

The PrimeLab is even future proof as you are able to add Parameters that are not installed on the device at purchase and can be conveniently installed by using "PrimeLab Desktop Assistant" software.

colour	wavelength (nm)
purple	380 - 420 nm
blue	420 - 490 nm
green	490 - 575 nm
yellow	575 - 585 nm
orange	585 - 650 nm
red	650 - 750 nm

Colours and their wavelengths

Wavelength coverage of the JENCOLOR sensor



The Software

„PrimeLab Desktop Assistant"

PrimeLab.exe

One of the innovations of the "PrimeLab 1.0" is the lightning-fast wireless connection of the photometer to a Windows PC via Bluetooth.

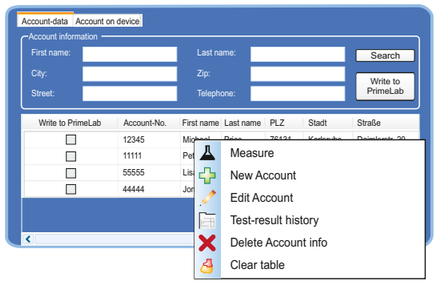
Once the device has been successfully connected to the PC, the "PrimeLab 1.0" will connect instantly and automatically after each power-up, just as you know it e.g. from smartphones when entering your car.

Each "PrimeLab 1.0" with integrated Bluetooth module is accompanied by a Bluetooth USB dongle with which you can add Bluetooth capability to your computer if this is not already enabled.

Using a CD accompanying the "PrimeLab 1.0", within a few minutes the "PrimeLab Desktop Assistant" software can be installed.

A strikingly powerful tool that allows you to perform many different tasks related to the identification and evaluation of water values.

Account- and Test-Result-Management



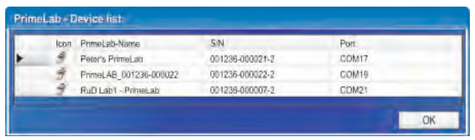
- Define any number of "accounts" (addresses, measuring sources with volume specifications…). Each measurement performed with the PrimeLab is assigned to such an "account".
- Store your individually used water treatment chemicals (e.g. "pH Minus").
- Store ideal ranges for each measurement parameter (e.g. "pH 7.2 – 7.4").
- Convenient reporting function for printing results; account-related, selected by date and / or parameter.

- You can input the water treatment chemicals that you use and ideal ranges for each parameter you can get dosage recommendations calculated, view them and print them.
- Transfer of 20 "Accounts" to the PrimeLab per mouse click.
- Synchronization of measurement data between the PrimeLab and the "PrimeLab Desktop Assistant"

Parameter-Management / Remote Control

- Subsequent uploading of additional parameters on the PrimeLab by entering a code into the software
- Remote control of the PrimeLab
- Overview of all methods of measurement with display of measurement ranges and stored ideal ranges
- Definition of customized ideal ranges per parameter

Setup



- Update of the PrimeLab firmware and the "PrimeLab Desktop Assistant" software by mouse click
- Personalisation of the PrimeLab / individual naming of your machine

- Setting date and time / Internet access / reset to factory default values

Glossary / Support

- Networking with other users via the forum on www.PrimeLab.org
- Extensive information on water per parameter in the section "Glossary"
- Connection of multiple PrimeLabs to the software

Parameters list

As per February 2013

The PrimeLab starts with about 70 different measurement methods for which we provide quality reagents "made in Germany / UK".

The option of using the JENCOLOR sensor to measure all parameters whose colour development is in the visible range (380 – 780 nm) after addition of a reagent, allows an even greater number of parameters to be measured with the PrimeLab.
The list shown here will become even longer over time. This does not mean that your PrimeLab will quickly become obsolete, since via the "PrimeLab Desktop Assistant" it is simple to upload additional para-meters by entering a code – within minutes- and also long after purchase of the device. The software will actively alert you when updates are available!

Group	ID	Parameter/Methode	Test-Range	Reagent(s)
Active oxygen				
	1	Active Oxyg. (MPS)	0 - 40 ppm	Tablet
Alkalinity				
	6	Alkalinity P	5 - 300 ppm	Tablet
	5	Alkalinity-m	5 - 200 ppm	Tablet
Aluminium				
	4	Aluminium	0 - 0.3 ppm	Tablet
Ammonia				
	2	Ammonia (LR)	0 - 1 ppm	Tablet
	3	Ammonia (LR)	0 - 2 ppm	Powder
Boron				
	7	Boron	0 - 2 ppm	Tablet
Bromine				
	8	Bromine	0 - 18.00 ppm	Tablet
	63	Bromine	0 - 18.00 ppm	Liq./Powd.
Carbohydrazide				
	71	Carbohydrazide	0 - 1.3 ppm	Liquid
Chloride				
	10	Chloride	0.5 - 25 ppm	Tablet
Chlorine				
	11	Chlorine	0 - 8.00 ppm	Tablet
	12	Chlorine	0 - 8.00 ppm	Liquid
	14	Chlorine HR (KI)	5 - 200 ppm	Tablet
	15	Chlorine HR (KI)	0 - 200 ppm	Liquid
Chlorine Dioxide				
	16	Chlorine Dioxide	0 - 15.0 ppm	Tablet
	64	Chlorine Dioxide	0 - 15.0 ppm	Liquid
COD				
	79	COD (LR)	0 - 150 ppm	MERCK
	80	COD (MR)	0 - 1500 ppm	MERCK
	17	COD (HR)	0 - 15000 ppm	MERCK
Copper				
	18	Copper	0 - 5 ppm	Tablet
	19	Copper	0 - 5 ppm	Powder
Cyanuric Acid				
	20	Cyanuric Acid	2 - 160 ppm	Tablet
DBNPA				
	65	DBNPA	0 - 13 ppm	Liquid
	82	DBNPA	0 - 13 ppm	Tablet
DEHA				
	21	DEHA	20 - 1000 ppb	Liquid
Erythorbic Acid				
	70	Erythorbic Acid	0 - 3.5 ppm	Liquid
Fluoride				
	72	Fluoride	0 - 2 ppm	Liquid
Hardness				
	78	Calcium Hardn.	0 - 500 ppm	Tablet
	9	Calcium Hardn. (HR)	50 - 1000 ppm	Tablet
	56	Total Hardn. (LR)	2 - 50 ppm	Tablet
	57	Total Hardn. (HR)	20 - 500 ppm	Tablet
Hydrazine				
	23	Hydrazine	0 - 2 ppm	Liquid
Hydrogen Peroxide				
	24	Hyd. Peroxide (LR)	0 - 3 ppm	Tablet
	66	Hyd. Peroxide (LR)	0 - 3.8 ppm	Liquid
	25	Hyd. Peroxide (HR)	0 - 200 ppm	Liquid
Hydroquinone				
	26	Hydroquinone	0 - 2.5 ppm	Liquid
Iodine				
	27	Iodine	0 - 28 ppm	Tablet
	67	Iodine	0 - 28 ppm	Liquid

Group	ID	Parameter/Methode	Test-Range	Reagent(s)
Iron				
	28	Iron (LR)	0 - 1 ppm	Tablet
	29	Iron (MR)	0 - 10 ppm	Powder
	30	Iron (HR)	0 - 30 ppm	Liquid
Manganese				
	31	Manganese (LR)	0.2 - 4 ppm	Tablet
Methylethylketoxim				
	69	Methylethylketoxime	0 - 4.1 ppm	Liquid
Molybdate				
	32	Molybdate (HR)	1 - 100 ppm	Tablet
	33	Molybdate (HR)	5 - 200 ppm	Liquid
Nitrate				
	34	Nitrate	0 - 100 ppm	Powder
Nitrite				
	35	Nitrite (LR)	0 - 0.5 ppm	Tablet
	36	Nitrite (HR)	5 - 200 ppm	Powder
Ozone				
	37	Ozone	0 - 5.4 ppm	Tablet
	92	Ozone	0 - 5.4 ppm	Liquid
PHMB				
	43	PHMB	2 - 60 ppm	Tablet
Phosphate				
	44	Phosphate (LR)	0 - 4 ppm	Tablet
	45	Phosphate (LR)	0 - 4 ppm	Liquid/Powder
	46	Phosphate (HR)	0 - 80 ppm	Tablet
	47	Phosphate (HR)	0 - 100 ppm	Liquid
Phosphonate				
	87	Phosphonate	0 - 20 ppm	Liquid
pH				
	40	pH-value (LR)	5.2 - 6.8	Tablet
	38	pH-value (MR)	6.4 - 8.4	Tablet
	39	pH-value (MR)	6.4 - 8.4	Liquid
	41	pH-Universal	5 - 11	Tablet
	42	pH-Universal	4 - 11	Liquid
Polyacrylate				
	85	Polyacrylate	1 - 30 ppm	Liquid
Potassium				
	48	Potassium	0.7 - 12 ppm	Tablet
QAC				
	83	QAC	25 - 150 ppm	Tablet
Silica				
	49	Silica (LR)	0 - 5 ppm	Liquid/Powder
	50	Silica (HR)	0 - 100 ppm	Powder
Sodium-Hypochlorit				
	51	Sodium Hypochlori te	0.2 - 40 %	Tablet
	68	Sodium Hypochlorite	0.2 - 40 %	Liquid
Sulphide				
	52	Sulfide	0.04 - 0.5 ppm	Tablet
Sulphite				
	53	Sulphite (LR)	0 - 5 ppm	Tablet
	86	Sulphite (HR)	0 - 500 ppm	Liquid
Sulphate				
	54	Sulphate	5 - 100 ppm	Tablet
	55	Sulphate	5 - 100 ppm	Powder
Suspended solids				
	81	Suspended solids	0 - 750 ppm	-
Triazole				
	58	Triazole	0 - 15 ppm	Powder
Turbidity				
	59	Turbidity	0 - 1000 FAU	-----
Zinc				
	62	Zinc	0 - 1 ppm	Tablet

THE PRIMELAB 1.0 MULTITEST

The "PrimeLab 1.0 Multitest" is a high-tech photometer of the latest generation.

Small and handy, but incredibly powerful thanks to the multi-spectral JENCOLOR sensor and able to be connected, depending on the version, via Bluetooth to the PC and the "PrimeLab Desktop Assistant" software.

Technical Details / Features

Dimensions:	175 mm × 88 mm × 59 mm
Weight:	160 g
Spectral range:	380 nm – 780 nm with 7 open channels and ±40 nm overlap each
Data Transmission:	Built-in Bluetooth module
Calibration:	Auto-calibration by JENCOLOR sensor; determination of LED brightness
One Time Zero:	Intelligent OTZ (One Time Zero) function, detecting different ZERO types
Internal memory:	100 data records / 20 accounts records
Clock / Date:	RTC (real-time clock) with date function
Auto-Off:	Default = 10 minutes. Individually adjustable
Menu navigation:	Intuitive, display-controlled 4-button menu system; test instructions during the measurement process (can be skipped)
Power supply:	optionally 4 × 1.5 V AAA batteries or 100–240 V AC, 50/60 Hz, 0.2 A → 5.0 V, 1200mA, 6 W
Display:	Graphical LCD display, monochrome
Operating languages:	German, English, Spanish, French
Environment:	5 °C – 45 °C (41 °F – 113 °F) / 30 % – 90 % rel. humidity
Water resistancy:	The unit is splash-proof
Reagents:	The calibration curves of the individual parameters are matched to the reagents offered by the manufacturer. The use of reagents by other manufacturers may result in measurement errors! The scope of delivery of the PrimeLab includes solely high-quality reagents "Made in Germany" and "Made in Britain"!

PrimeLab.exe

Use the Software "PrimeLab Desktop Assistant" for:

- Uploading further measurement methods on the PrimeLab
- Convenient management of test results with reporting function
- Create proposals for water treatment on the basis of measurement results by entering your water treatment chemicals as well as ideal ranges (min/max) per parameter.
- Update the PrimeLab firm- and software
- Remote control your PrimeLab

Basic Equipment

- PrimeLab Multitest with integrated Bluetooth module
- Black plastic case
- DC adapter (220/110 V) with interchangeable international plugs
- 4 × AAA 1.5 V batteries
- Bluetooth USB dongle for wireless connection to your PC
- CD-ROM "PrimeLab Desktop Assistant"
- 2 × 24 mm standard round cuvette (glass / 10 ml) with light absorber integrated into lid
- Light protection lid for 16-mm standard cuvettes
- 10-ml syringe
- Cleaning brush for cuvettes
- Stirring rod

Optional

- Adapter for MERCK 16mm "Prepared" cuvettes
- 100ml plastic measuring tube
- Filter unit for filtering water samples

Installed parameters / measurement methods

The parameters / measurement methods installed on the PrimeLab may be individually defined by the user and extended at any time after purchase by entering activation codes into the software. Thus also subsequently developed measurement methods can still be installed.

The PrimeLab will never become obsolete.

CE TÜV SÜD

Certikin

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